

Two private companies have POWTS component manuals approved

by Roman Kaminski, S&B POWTS Program Manager, rkaminski@commerce.state.wi.us, 715-345-5334

Two private companies have submitted Private Onsite Wastewater Treatment Systems component manuals and they both have been approved by the Safety and Buildings Division. The two manuals include specifications that must be followed, along with design, construction, inspection, and maintenance guidance.

One of the component manuals, from Environmental Health Services, Inc., is for an aerobic treatment device. The other, from Multi-Flo Waste Treatment Systems, Inc., is for an aerobic treatment device and a dripline treatment/dispersal unit.

When Comm 83, Wisconsin's POWTS Code, was revised in July, 2000, it included nine POWTS component manuals in subchapter VI, "Recognized Methods and Technologies," which were prepared by the Safety and Buildings Division and an advisory POWTS council. These manuals presented nine specific types of methods and technologies recognized by the division under the voluntary product approval process in Comm 84.10(3).

Methods and technologies approved under this process may be used in any POWTS within recognized specifications without requiring the submittal of data to substantiate performance at the time of plan review.



Since the effective date of the new Comm 83, S&B has prepared and released three so-called "Version 2.0" manuals, which include technical changes from some of the original manuals. These three manuals were handled via a voluntary POWTS component review process that was included in revisions made to Comm 84, Plumbing Products Code.

S&B's component manuals are available for viewing and downloading on our WebSite, <http://www.commerce.state.wi.us/SB/SB-DivPublications.html>. The manuals also may be purchased through state Document Sales, see page 7.

Proprietary manuals submitted by external customers, when approved, are listed along with other plumbing products in the *Wisconsin Plumbing Products Register*. The individuals or companies who prepare these manuals are required to supply copies to S&B staff and to the counties. The companies market and distribute the manuals as they see fit to property owners, designers, installers, and other interested parties.

If you have questions about the POWTS component manual review process, contact Mike Beckwith, 608-266-6742, mbeckwith@commerce.state.wi.us.

S&B WebSite:
www.commerce.state.wi.us/sb

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Plan Review Scheduling

For plan review scheduling for Plumbing and Buildings, call the S&B office numbers listed above, or contact the email address shown. Fax scheduling is possible, 877-840-9172. Information about the project will be needed to schedule the plan review. Any of the offices can schedule the first appropriate plan review available statewide.

Plan review for Private Onsite Wastewater Treatment Systems is provided on a first-come, first-served basis. Contact one of the offices for information.

For scheduling info, also see <http://www.commerce.state.wi.us/SB/SB-DailyDoc.html>.

Questions about your continuing education credits?

Check the mailing address back page for a printed line giving your status for plumbing-related S&B credentials. Or, call the Credentialing Unit, 608-261-8500. Or, check the S&B WebSite, <http://www.commerce.state.wi.us/SB/SB-HomePage.html>, choose "Credentials."

Plumbing Consultants

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Public Swimming Pool Reviewer

Glen Jones Madison 608-267-5265

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There are proposed plumbing code changes going to public hearing in early 2002. Here's a look at what might be in the future of Wisconsin's plumbing.

Someone calls the your plumbing company office the morning of June 6, 2004. It's a couple you're known for a long time. Joe and Ellen, are buying a lakeside cabin near Minoqua. The soil and site evaluation requires that a holding tank be installed due to the vertical setback to high groundwater. To complicate the situation, Joe and Ellen have a well that produces less than 5 gallons per minute and the well water in the area has a pH of 5. Joe's asking you to install the holding tank and also replace the plumbing system in the home. Ellen's recently read about water conservation options and wants to know if the plumbing can be installed to be "environmentally friendly."

In order to size the holding tank you need to know the effluent value from the building. In order to design the interior plumbing system, you need to consider - pH of 5 or less; gpm of less than 5 from the well; conservation approach desired by the customers; holding tank POWTS

pH of 5 or less. The well water at a pH of 5 will either need to have the pH adjusted or copper tubing will be eliminated as a water supply piping choice (Part of revisions to Comm 84.30-7 and 8 for water service and distribution materials). Joe and Ellen are planning to have all the fixtures in the building removed and new piping installed. Based on that choice, you recommend a different piping material for the water service and distribution system. If they'd wanted to keep the water distribution system materials that are in the building, a treatment tank to increase the pH of the water would be the logical choice, but since the system's being replaced, a material that can tolerate the low pH can be installed.

gpm of less than 5 from the well and conservation approach. Joe and Ellen plan on installing one bathroom group with a tub/shower combination and a flush tank water closet, one kitchen sink, one half-inch exterior wall hydrant and an automatic clothes washer. Turning to Comm 82.40-1 you calculate the demand of the building is 10 water

For more information, contact S&B Plumbing Program Manger Lynita Docken, 608-785-9349, Ldocken@commerce.state.wi.us



Water conservation and protection of water quality are important throughout Wisconsin, not just in the northwoods

supply fixture units. Converting that to gallons per minute, you find the demand of the system is 8 gpm. You know the well won't provide the flow without added storage. The plumbing code requires that sufficient water be supplied for the fixtures to function properly. [See 82.10(4)] A pressure tank can be installed to provide storage for the fixtures. Another way to reduce demand would be to store and provide graywater from the kitchen sink, shower, automatic clothes washer, and lavatory to the water closet.

Table 82.70-1 has the requirements for water treatment systems. One of the requirements is relevant for Joe and Ellen's system:

Intended Use:

Toilet and urinal flushing . . .

Water Quality Standards:

pH of 6 – 9

≤ 10 mg/L BOD5

≤ 5 mg/L TSS

No detectable fecal coliform/100 mL

≥ 1 mg/L chlorine residual

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If the plumbing code changes ...

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The gpm demand of the flush tank water closet will affect the demand of the building. The water closet demand can be eliminated from the water supply sizing calculations for the demand on the well, and will reduce the water supply fixture units to 9 and the gpm to 7. The demand in excess of the well capacity is 2 gpm. Planning on a 5-minute storage in the pressure tank would be sized for an extra 10 gallons over the original design. This is a matter for the pump installer and plumber to work out together.

Holding tank POWTS. Joe and Ellen want to install a holding tank that they will have pumped

once per summer. Working in Comm 83.43(2), (3), and (4), the calculations show the cabin, which is a 1-bedroom home, has a discharge flow of 60 gallons per bedroom per day. (The graywater is being reused for toilet flushing, so the blackwater flow can be ignored in the calculation). The design flow is 90 (150 percent times estimated flow) gallons per day. The family plans to use the cabin for a total of 20 days per summer. 20 days times 90 gallons per day equals 1,800 gallons. Joe and Ellen can install a 2,000-gallon holding tank with no fear of pumping the tank more than once per year, unless the usage or treatment system changes.

S&B plumbing **continuing ed** classes will be held January 23 in Rhinelander, February 5 in Green Bay, and February 7 in Fond du Lac. For more information and the registration form, see the October 2001 *WPCR* or visit the S&B WebSite, <http://www.commerce.state.wi.us/SB/SB-PlumbingProgram.html>.

Memo on issuing large POWTS permits

by Roman Kaminski, S&B POWTSProgram Manager, 715-345-5334, rkaminski@commerce.state.wi.us

SUBJECT: Issuance of Permits for Large (>12,000 gpd Design Flow) Private Onsite Wastewater Treatment Systems

The current Memorandum of Understanding (MOU) signed by the Department of Commerce and the Department of Natural Resources (DNR) in 1999 identifies interim and long term approaches relative to each agency's authority, under chs. 145, 160, 281, and 283, Wis. Stats., to administer and regulate onsite sewage systems.

The long term goal is for each agency to have complete and exclusive jurisdiction over either "small" or "large" onsite systems. Statutory and administrative rule changes are still needed to accomplish this goal. Until these changes are made, the interim approach delineated in the MOU for regulating large onsite systems continues to govern.

However, a better understanding of each agency's permitting functions has resulted in the following clarification. Until such time as the necessary statutory and administrative rule changes are enacted, in accordance with s. 145.19(1), Wis. Stats., a state Sanitary Permit will have to be issued for any large onsite sewage system reviewed and approved under the provisions of chapter Comm 83, Wis. Adm. Code. This Sanitary Permit is considered a "construction permit" and, unless the onsite system serves a state-owned facility, will be issued by the county in which the project is located. Issuance of the Sanitary Permit will allow the county to provide inspection oversight of the project. The DNR will continue to review types of projects as identified in the MOU and the DNR will decide when to issue a WPDES permit that will serve as the "discharge and operating permit" for a project.

Unpaid Related Instruction Requirements

Information from the state Department of Workforce Development, Bureau of Apprenticeship Standards

Required Courses	HOURS		NOTES
	Min.	Max.	
Plumbing Applications Lab	36	60	Statewide course with suggested learning activities. Wisconsin Technical College System (WTCS) recommended #50-427-550; 1 credit.
Plumbing Blueprint Reading	32	45	Statewide course includes blueprint, spec book, and questions. WTCS recommended #50-427-557; 1 credit. Apprentice should have some experience and exposure to code, Isometrics and DWV piping, before taking this course.
Plumbing Repair	45	90	Statewide course outcome summary with recommended activities. WTCS recommended #50-427-569; 54 hours; 1.5 credits.
Transition to Trainer: Your Role as a Journey Worker	7	17	Complete statewide course for apprentices in their final year. WTCS recommended course #47-455-455; .2 credit. Additional 10 hours should be accepted for Preparing to Teach Transition to Trainer course #47-455-456; .25 credits.
Isometric Interpretation and Drawing	18	40	Locally developed. Ideally taken later in apprenticeship and geared toward plan submittal. This is a good place to address residential prints.
Transit / Level / Laser	18	40	Locally developed. Class may include other trades. Lasers are important; suggest inviting vendors. Recommend .75 credit.
Welding	30	60	Locally developed. The first 30 hours could be a general technical college welding course. It is highly recommended that the second 30 hours address competencies in the areas of brazing, silver soldering, and soldering of large diameter copper pipe.
Safety / OSHA	24	54	Local course open to all trades. OSHA card strongly recommended but not necessary; need to confirm current OSHA requirements. Thirty hour construction-oriented "OSHA 500" course is recommended.
First Aid / CPR	12	30	Red Cross certified or equivalent course. First Aid certification must be kept current throughout the term of the apprenticeship.

Total 222

Plumbing apprentices must complete a minimum of 260 hours of unpaid related instruction. Local committees may approve hours and / or courses beyond the 222 hour minimum listed above.

For more information, contact S&B Plumbing Program Manager Lynita Docken, 608-785-9349, Ldocken@commerce.state.wi.us

Continuing Education

Presented by A & K Services
Classes also available at your location in Northwest Wisconsin

Ashland

Chippewa Falls

New Richmond

Two Classes – Advanced Registration Required - Approved for MP, JP, MPRS, JPRS, & UDC Inspectors.

Drain Waste and Vent – This 3-hour course will cover the basic requirements for designing and sizing basic drain, waste and vent systems including individual, common and circuit vents. This course is approved for MP, JP, MPRS, JPRS, and UDC Inspectors.

Wet Vents and Combination Drain & Vents – This 3-hour course will review basic sizing of drain and vent systems. Wet vents and combination drain & vent systems will be covered in detail. This class is approved for MP, JP, and UDC Inspectors.

Locations- All Classes Start at 6 p.m. – Meal Included

Ashland – Zeis's Platter Restaurant, 315 Turner Road, Ashland

Chippewa Falls – The Fill Inn Station, 104 West Columbia, Chippewa Falls

New Richmond – Suzanna's Restaurant, 1220 S. Knowles, New Richmond

Detach the registration form below and mail with your check to: A & K Services, P O Box 1012, Chippewa Falls, WI 54729. Advanced registration is required. Make checks payable to: A & K Services. Questions? Call (715) 723-5320 Fee - \$37 per class – Meal Included

Name: _____ Phone Number: _____

Address: _____ License Type: _____

Please indicate which classes you will be attending.

Ashland	_____ Drain Waste & Vent	March 4 th
	_____ Wet Vents & Combination Drain & Vents	March 18 th
Chippewa Falls	_____ Drain Waste & Vents	February 25 th
	_____ Wet Vents & Combination Drain & Vents	February 28 th
New Richmond	_____ Drain Waste & Vents	March 7 th
	_____ Wet Vents & Combination Drain & Vents	March 21 st

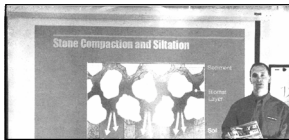
E-mail technical code questions to S&B staff:

--Commercial buildings, Comm 50-64, 66, 69, etc. = bldgtech@commerce.state.wi.us
--Plumbing, cross connection = plbgtech@commerce.state.wi.us
--Private onsite wastewater treatment = powttech@commerce.state.wi.us
--Public swimming pools = pooltech@commerce.state.wi.us
--Building and plumbings products = productech@commerce.state.wi.us
--Licenses, certifications, registrations = madisoncred@Commerce.state.wi.us
--Manufactured/mobile homes = manf-homes@commerce.state.wi.us
--One- and Two-family Dwelling Code = udctech@commerce.state.wi.us

UW-Small Scale Waste Management Project Winter Educational Sessions

February 2002 - Arlington, Tomahawk, Rice Lake, Fond du Lac

- Linking Linear Loading Rate to Soil Morphology - E. Jerry Tyler
- Drip Distribution Design, Installation and Maintenance - Jim Converse
- Matching Soil Science, Code Requirements and Reality - E. Jerry Tyler
- Mound/At-Grade System Design with Pressure Distribution - Jim Converse



3 continuing education credit hours for CST, MP, MPRS, JP, JPRS, POWTS M, POWTS I

For more information, contact Jim Peterson, UW Environmental Resources Center, 1450 Linden Drive, Madison, 53706; 608-262-3799; jopeters@facstaff.wisc.edu

POWTS Training Seminar from Wieser Concrete

February 21, 2002, 8 a.m. - 3:30 p.m., Eau Claire Best Western-Midway

Call 715-835-2242 for directions

Topics: Code Update by S&B staff - Fast Unit Maintenance, Troubleshooting - North American Wetlands - Zabel, Zoller, Orenco, Sim Tech - Sand filters, Advantax - Drip Systems - Septic Tank Manufacture

Pre-registration is appreciated by Feb. 20, 800-641-5937, Wayne or Diana at Wieser Concrete, \$10 per person at the door, lunch provided

Six hours con ed credit for POWTS I, MP, MP-RS, JP, JP-RS, CST, POWTS M

If you have questions about your continuing education status, contact the Safety and Buildings Division Credentialing Unit, 608-261-8500, madisoncred@commerce.state.wi.us

Safety and Buildings-related codes are on the Internet, www.commerce.state.wi.us/SB/SB-CodesListing2001.html

Not all codes are available electronically. Paper copies may be purchased from Document Sales, 800-362-7253, for credit card purchases, or 608-266-3358.

State administrative codes and the code update service may be purchased by contacting state Document Sales, 608-266-3358, or 800-362-7253, for credit card purchases. ❖ ❖ ❖ ❖ ❖ ❖

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